WATER SUPPY PLANNING

DATA MANAGEMENT MEETING/WORKSHOP

Virginia Department of Forestry Training Room
Fontaine Research Park
900 Natural Resources Drive
Charlottesville, Virginia
Wednesday, November 14, 2007
1:00 – 4:00 P.M.

Meeting Notes

Meeting Attendees

Attendee	Organization	Email
Vernon Anderson	Town of Vienna	vanderson@viennava.gov
Sharon Angle	City of Staunton	anglese@ci.staunton.va.us
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Kevin Byrd	New River Valley Regional Commission	kbyrd@nrvdc.org
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Jennifer Hoover	Augusta County Service Authority	jehoover@co.augusta.va.us

Joan Hullett	West Piedmont PDC	jhullett@wppdc.org
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Laura Wheeling	Hampton Roads PDC	lwheeling@hrpdcva.gov
Andrea Wilkinson	Ruckersville Citizens Concil	wilkinsoncpa@aol.com

DEQ Staff Attending

Adrienne Averett	South Central Region WSP	adrienne.averett@deq.virginia.gov
Joe Hassell	Central Office WSP	joseph.hassell@deq.virginia.gov
Sara Jordan	Valley Region WSP	sara.jordan@deq.virginia.gov
Scott Kudlas	Central Office – OWSP - Manager	scott.kudlas@deq.virginia.gov
Bill Norris	Central Office – Piedmont Region WSP	william.norris@deq.virginia.gov
Andy Putscher	Northern Region WSP	andrea.putscher@deq.virginia.gov
Tammy Stephenson	West Central & South West Region WSP	tammy.stephenson@deq.virginia.gov

1. **Welcome & Introductions:** Scott Kudlas welcomed all those in attendance (Full Attendance List is attached) and asked for brief introductions from each of the DEQ Office of Water Supply Planning staff in attendance.

2. **Meeting Objectives:** The following meeting objectives were identified:

   - To conduct a second post-implementation discussion on how the program is working to date;
   - To focus on the Phase II activities of the local and regional water supply planning efforts;
   - To allow for a free exchange of information on experiences compiling information and gathering data to comply with the regulation among the individuals developing the plans;
   - To review any obstacles and limitations to acquiring the data;
   - To discuss any successful model approaches to obtaining and managing the data;
   - To allow those individuals developing water supply plans the opportunity to ask questions of other meeting attendees who may be further along in the process;
   - To solicit ideas on improvements that could be made;
   - To allow for input on how the DEQ may manage this data over time as part of the State Plan; and,
   - To discuss next steps.

3. **Meeting Agenda:** Scott Kudlas reviewed the meeting agenda. The meeting will consist of several presentations by DEQ staff on the various next components of the regulation that are normally covered during phase II of a water supply planning effort with group discussions by meeting attendees to discuss the local and regional concerns prompted by each of the regulation components. Meeting participants will be asked to come together in a number of groups around the tables to discuss each of the individual water supply planning concepts presented during the presentations. DEQ Staff members will be participating at each of the tables by taking notes and acting as the "table" scribes and "reporter". He noted that each of the tables was to address and discuss each of the meeting topics identified below for approximately 30 to 40 minutes each, with the goal of having a list of thoughts and suggestions for each topic at the end of that time that could be shared with the entire group.

   - Projected Water Demand & Statement of Need & Alternatives;
   - Water Demand Management; and,
   - Drought Response & Contingency Plans

4. **Summary of Presentation by Joe Hassell on Projected Water Demand & Statement of Need and Alternatives (Section 100):**

   Joe Hassell gave a presentation on the requirements to comply with Section 100 of the Water Supply Planning Regulation – Projected Water Demand & Statement of Need.

- **Projections – Planning Regulation Requirements:** "Population…should be estimated according to information from the U.S. Census Bureau, Bureau of Economic Analysis, the Virginia Employment Commission or other accepted source of population information including but not limited to, local or regional sources. Demand projection methodologies should be consistent with those outlined in the American Works Association or the American Society of Civil Engineers manuals." – NOTE: The planning regulation requires the disaggregation of use by various categories. The Weldon Cooper Institute also provides population estimations.
- **Permit Regulation Requirements:** "Information on the proposed use of and need for the surface water and information on how demand for surface water was determined. – If during the water supply planning process, the need for the withdrawal was established, the applicant may submit said planning process information. The board shall deem such a submittal as meeting the requirements of this subsection (see also 9VAC25-780-100 and 9VAC25-780-130)." – NOTE: For permits you do have to provide information on how much water you need and how you arrived at that value, but we do not say how you have to get there. Also, if you have done the water supply planning properly, you are supposed to be able to use those projections in the permit application process. The recent enactment of the Amendments to the Virginia Water Protection Permit Regulations provides a linkage between permitting and planning.
- **Typical Projection Methodologies include:** "Gross Per Capita; Trends; Comprehensive Plans (Area Based); Disaggregated; and Hybrid".
- **The Gross Per Capita method requires you to:** Determine the system water use; determine the population served; compute the gross gallons per capita per day; project future population served; and project future water use (GPCD x future population served).
- **Use the Gross Per Capita Method:** "As a check for other more sophisticated analyses; for small or medium sized towns; for systems in which the majority of the population is publicly supplied; and for systems where sophisticated analysis is not required, i.e. no immediate water needs."
- **Sample Gross GPCD Values include:** Covington (426); Danville (140); Emporia (186); Radford (143); Salem (147); Staunton (175); Williamsburg (262); Richmond (148); Winchester (279); Farmville (135); Front Royal (131); Manassas (286); Orange (142); South Boston (216); Strasburg (175). NOTE: Figures used include all water withdrawals for the locality.
- **Trends:** "Use as a check of other methodologies and as graphical illustrations of what has been and what might be according to various methodologies."
- **Disaggregated Methodologies:** "Typical Categories include: Residential/Domestic; Commercial, Institutional, light industrial; Industrial; Military and Unaccounted for losses."
- **Typical Formularies:**

- Residential = Population Served x GPCD (Typical 65 gpcd, ranges from 40 to 80;
- Commercial and Industrial: Typical 40 gpcd, ranges 10 – 75;
- Public Uses: Typical 20 gpcd, ranges 60 – 100;
- Losses: Typical 20 gpcd, ranges 15 – 25 gpcd or 10% to 20% of Total Use.

· **Comprehensive Plan Methodologies:** "Use land use types, area and water use coefficients to predict water use; often do not show growth in water use over time but forecast build out water use; reasonable assumptions should be applied to build-out based on the planning period; and should be 'ranged' with a population method."

· **Previously Used Coefficients GPAcre:** Community Residential (1000); Community Commercial (2000); Light Industrial (2000); Heavy Industrial (3500); Village Mixed Use (1500); Public Institutional (600); Commercial (1300); Heavy Industrial (4500); Retail Business (674); Other Commercial (2514); Commercial (1000); Office (2000); Light Industrial (1500); Heavy Institutional (1000). NOTE: It is important to know the boundaries of the local service areas.

· **Hybrid Methodologies are:** "A Collection of Different Assumptions; often found in regional plans and projects where each locality has its own methodologies; usually use some variations of disaggregation and comprehensive plan methodologies; and sometimes use existing use as a base and use various unique assumptions regarding future growth." Examples include:
  - BCPSA (2005) – Predicted Use (mgd) 0.236/Actual Use 0.122
  - RRWSG (2005) – Predicted Use (mgd) 62.76/Actual Use 54.15
  - RWSA (2005) – Predicted Use (mgd) 10.8/Actual Use 10.1
  - Salem (2006) – Predicted Use (mgd) 5.4/Actual Use 3.9

· **Safe Yield:** "Undefined by planning regulation but requires 'the name of the reservoirs, the sub-basins in which the reservoirs are located, the drainage area, the amount of on-stream storage available for water supply, the design capacity for average daily and maximum daily withdrawals fro the reservoirs, and the safe yield of the reservoirs." – NOTE: Some of these values are very important, water supply storage for example. The permitting program has had to deal with in the past with water supply storage being whatever an applicant says it was which sometimes varied depending on what was on the locality's agenda. Now the values will at least be written down somewhere and when a permit application comes in there may be less incentive to reduce a value.

· **Safe Yield for Stream Intakes:** "The planning regulation requires the following information be provided for stream intakes: the name of the stream or river, the drainage area of the intake, the sub-basin in which the intake is located, the design capacity for average daily and designed maximum daily withdrawal from the stream, the safe yield, and the lowest daily flow of record." NOTE: Again safe yield is not defined in the regulation but we would expect most people to report the 1Q30.

- **Safe Yield for River Intakes:** The VDH definition is "the minimum withdrawal rate available during a day and recurring every 30 years (30 years – one day low flow). Competing users (2 withdrawals from the same stream cannot safely take the 1Q30. DEQ periodically updates 1Q30 values of all gages and accepts safe yield determination based upon drainage area adjustments. Must consider regulated streams.
- **Safe Yield for Complex Intakes:** VDH definition is "the minimum withdrawal rate available to withstand the worst drought of record in Virginia since 1930. Moving target, (if 2002 drought is worse than previously used droughts, then the safe yield decreases). DEQ has updated 1985 Safe Yield publication for some simple systems using data from the 2002 drought.
- **What we watch for:**
    - We check reported drainage areas.
    - We check reported water supply storage versus previously reported water supply storage. (Sedimentation can and does reduce usable storage but we expect bathymetric data to back up the claims.)
    - We review sources that are declared obsolete to see if they really are obsolete. (Planed obsolescence of source is a big deal. We expect documentation to back up these claims from the owners of the sources declaring their intentions to go out of business.)
    - We review operational assumptions to see if they make sense.
    - We review risk levels to see if they make sense. (Because of the VDH definition, we do not have much flexibility here.)
- **Conclusion:** §62.1-11.E – State Policy as to Waters: "The right to the use of water or to the flow of water in or from any natural stream, lake or other water course in this Commonwealth is and shall be limited to such water as may reasonably be required for the beneficial use of the public to be served."
- **Reasonableness is a subjective term:** DEQ Planning and Permitting Regulations are flexible with regard to methodology but require documentation of assumptions. DEQ reviews assumptions and compares them with readily available independent information in assessing whether the assumptions are reasonable. NOTE: The standard is subjective. The planning and permitting regulations are detailed but flexible and we use best professional judgment and a host of independent information sources in deciding whether or not to approve plans or issue permits for requested amounts. We know what areas of projections are reasonable and when they are exaggerated.

5. **Summary of Projected Water Demand; Statement of Need and Alternatives Discussions (Section 100):** Comments/Concerns/Questions included:

    - People tend to overshoot their estimates. **Isn't it fair to allow for an inflated estimate to allow for future growth?** Practically, we can't

permit something that is over designed. Permit people are not allowed to permit an over-inflated estimate that is over the identified need. The applicant must prove that the need is real.

- **What about the periodic review, every 5 year, requirement?** If a project shows a need for an alternative and provides demand projections to support that need that appear to be high in staff's consideration, then the comment will be made that the project will need to be reviewed to justify that need.
- It looks like localities are dealing with a moving target when addressing the calculation of a safe yield figure. **When dealing with a ground water source, should a locality require a draw-down test?** A 24 hour pump test doesn't tell you much about the safe yield of a ground water source. Better to use the experience of DEQ's Ground Water Characterization staff to formulate an idea of what the ground water sources in a locality can provide.
- Due Dates are driving regionalism.
- Best source of information is with the Utility Professionals.
- Small Counties lack experience.
- Local boundaries do not match watershed boundaries.
- Local politics sometimes gets in the way of natural partners.
- Need to incorporate water supply planning regulations in the updates to local water and sewer master plans.
- Population/Demand projections may be covered in Comprehensive Plan, depending on how detailed or sophisticated the local comprehensive plan is.
- Differences of Regions – Growth v. Loss v. Status Quo.
- **Where do we find acceptable usage numbers for agriculture and livestock usage?**
- Appomattox Regional: Completed Draft Plan; Technical and Political Issues informed the Projection process; Different types of communities can require different proven methodologies.
- Staunton: Did have a demand study done in 2000; city is submitting solo, but participating in a regional effort; city has a comprehensive plan.
- **When is the plan submittal deadline?**
- Prediction accuracy: Rivanna was too close a projection. Maybe DEQ should be less restrictive in its analysis of projections.
- Virginia isn't actively courting water intensive industry.
- Data Collection Difficulties: Sales data can be bard to obtain and hard to disaggregate.
- More sophisticated estimates don't always help.
- Service area boundary changes are difficult to foresee.
- Commonwealth Regional Council in data collection stage.
- Methods of choice – Combination of Land-use and GPCD.
- 25 – 30 % more realistic figure for Unaccounted for Water. The goal is usually 15%, but none near that.

- Lack of Funding for water supply plan development a real problem. Localities that do not, or did not receive funding through the grant process are NOT progressing in the development of the required plans.
- Improvement in ground water information availability would be most useful.
- Better record keeping is needed.
- Implementation the key, not just information that is put on a shelf.
- Nottoway County uses a hybrid method.
- HRPDC and Alleghany Highlands – projections are greater than actual use. **Why is a larger projection not necessarily good?**
- **How can use be estimated outside of the public supply area?**
- Spotsylvania County: **Where should the majority focus be: rural well use versus surface water supply for municipal users?**
- **Should water sales be equal to demand?**
- Fort Pickett – Made projections with a demand for mobilization and a separate projection without mobilization.
- DEQ/VDH data sources – updated demand and use data is key!
- **How can you project more than 30 years?**
- **How do you project wholesale customer use?**
- **How do you address interconnections that are part of past trends, but are currently valved off but are available for the future?**
- **How do you carry forward the concept of a locality's exploding growth in the near term?**
- **Coordination with VDH requirements?**
- Historical Use is difficult to use regarding build-out estimates.
- Accounting for single source uses - individual – well records from 2000 – current permits; community water systems versus county population.
- Sub-sampled individual single source uses – large regional plan – use representative wells (yields) based on geology. Looking at growth outside of Community Water Systems – increased ground water use.
- Use Comprehensive Planning Process to get folks to show cards (projected use).
- **What about transient users (ex. Rest stops; truck stops, etc.)?** If hooked to Community Water System then lumped into commercial. Can get rest stop data from health department.
- Peak Day Water Use: VDH – won't find for many systems so use a multiplier. Issue: Max day and multiplier calculated does not mesh/match sometimes. Lots of difficulty in finding peak use data.
- Hybrid approach commonly used because of diversity of regional partners.
- Issue: Outdated engineering description sheets.
- Monthly meetings key to flush out data in region.
- Local knowledge the key.
- There have been pluses and minuses regarding feedback from Cooperative Extension regarding access to agricultural and livestock data.

- Disaggregation – Billing records are a good source. Identifying assumptions regarding disaggregation variability across regions is problematic.
- Important to discuss politics of water demand in region.
- SSPDC – Used GPC method.
- Manassas - Just completed projection of residential.
- Fluvanna – just getting started in the process.
- **What information can be obtained from the DEQ VWUDS database and how can it be used to meet the requirements of the regulation and in the development of the water supply plan?**
- **What information can be obtained from the VDH database and how can it be used to meet the requirements of the regulation and in the development of the water supply plan?**
- **How should a locality deal with demand projections for a system which had been through major changes in terms of who was purchasing how much water through what interconnections?**

6. Summary of Presentation on Water Demand Management Information (Section 110):

Adrienne Averett and Scott Kudlas provided an overview of the Water Demand Management Information requirements of the Water Supply Planning Regulation (Section 110).

- **Purpose:** "As part of a long-term strategy, a water plan shall address conservation as a part of overall water demand management." NOTE: Localities are require by law to provide adequate drinking water for their citizens and to plan for their growth and development.
- **Information Categories:** Efficient water use practices; water conservation measures; water loss reduction practices; and current practices within the planning area.
- **Efficient Water Use:** Practices for more efficient use of water include, but are not limited to: Adoption and enforcement of VA Uniform Statewide Building Code sections regarding low flow fixtures and appliances; low-water use landscaping; and increases in irrigation efficiency.
- **EPA's WaterSense Program:** Strives to protect the future of our water supply by promoting and enhancing the market for water efficient products, services & practices; spread the word about these products services & practices; Become a partner. Home Depot is going to be carrying appliances certified under EPA's WaterSense Program. Web link: http://www.epa.gov/watersense/index.htm. Scott asked that all localities and utilities consider signing up as a WaterSense Program Partner. If the state has enough partners signing up, there may be additional grant funds for distribution to localities.

- **Water Conservation Measures:** Measures used to conserve water through the reduction of use include but not limited to: technical; educational and financial.
- **Water Loss Reduction:** Practices to address water loss in the maintenance of water systems to reduce unaccounted for water loss. Practices include, but are not limited to: leak detection and repair and old distribution line replacement.
- **Water Loss Reduction Information Resources:**
  - Web link for additional information: http://www.awwa.org/Resources/topicspecific.cfm?ItemNumber=3653&navItemNumber=1583. Look for the Free Water Audit Software link.
  - Additional Resources available at: http://www.waterefficiency.net/we.html (Water Efficiency Magazine).
  - Also WaterWiser web link at: http://www.awwa.org/Resources/content.cfm?ItemNumber=29269&&navItemNumber=1561.
  - Alliance for Water Efficiency: http://www.allianceforwaterefficiency.org/index.html.
- **Summary:**
  - **Long-term water demand management strategy.**
  - **Consider conservation practices in water demand projections (9VAC25-780-100D)**
  - **Water is a limited resource: sustain current and future water demands and our water resources.**
  - **This section will help you build a long term water demand management strategy for your planning area.**
  - **Will allow you to account for conservation practices in your water demand projections.**
  - **Proactive water supply planning recognizes water as a limited resource. These methods and practices allow you to sustain current and future water needs and our water resources.**
- **Water Supply Planners:** Please make use of your regional water supply planners and the program web site for access to information about the water supply planning program.
- **Draft Water Demand Management Information Form:** A copy of a draft Water Demand Management Information Form was handed out. The draft form asks and contains space for information needed for each component of the water demand management section of the regulation. (Copy attached)

7. Summary of Presentation on Drought Response and Contingency Plan Information (Section 120):

Tammy Stephenson provided an overview of the "Do's and Don't of Drought Planning" when addressing the requirements of Section 120 of the Water Supply Planning Regulation.

- The WSP Regulation states: "A program that includes community water systems and self-supplied users who withdraw more than an average of 300,000 gallons per month of surface water and ground water **shall** contain drought response and contingency plans." NOTE: It is expected that most localities in the Commonwealth will prepare such a plan. The exceptions would be smaller localities. However, they, too, may wish to develop a DRC plan.
- The regulation further states: "Drought response and contingency plans shall be structured to address the unique characteristics of the water source that is being utilized and the nature of the beneficial use of water." NOTE: When developed, it was envisioned that the Water Supply Plan, including the Drought Response and Contingency Plan, would be developed on the local level. This is why it is vitally important to address issues that are important to your community when looking at this aspect of the WSP.
- "Drought response and contingency plans shall contain, at a minimum, the following three graduated stages of responses to the onset of drought conditions."
    - **Drought Watch Stage:** This stage is generally designed to increase awareness in the public and private sector to climatic conditions that are likely to precede t he occurrence of a significant drought event. Public outreach activities shall be identified to inform the population served by a community water system of the potential for drought conditions to intensify and potential water conservation activities that may be utilized.
        1. DO's in the Drought Watch Stage:
            a. DO establish indicators for this stage.
            b. DO review the state's established indicators as found in the *Virginia Drought Assessment and Response Plan, 2003.*
            c. DO identify how you will educate the public on the impending drought situation.
            d. DO use all avenues of media to disseminate information.
    - **Drought Warning Stage:** This stage is required when the onset of a significant drought event is imminent. Voluntary water conservation activities shall be identified with the goal of reducing water use by 5-10%.
        1. DO's in the Drought Warning Stage:

a. Do establish indicators for this stage.
b. Do establish detailed conservation measures that **SHOULD** be adhered to to obtain the targeted reduction in water use.

- **Drought Emergency Stage:** This stage generally goes into affect during the height of a significant drought event. Mandatory water conservation activities shall be identified with the goal of reducing water use by 10-15%.
  1. DO's in the Drought Emergency Stage:
     a. DO establish indicators for this stage.
     b. Do establish conservation measures that MUST be adhered to by the public.
     c. DO consider temporary increases in water costs for customers as a way to control water usage.
     d. DO establish the procedure and roles for monitoring and enforcement of these mandatory restrictions.

- Existing Local Ordinances: Drought response and contingency plans **shall** include references to local ordinances, if adopted, and procedures for the implementation and enforcement of drought response and contingency plans.
- **Governor Kaine's Press Release – November 7, 2007:** The Governor urged localities to update water conservation and drought contingency ordinances and plans and begin preparations to implement those plans. The Governor also encouraged citizens and businesses to strictly follow all calls for water conservation issued by public waterworks or local governments.
- **2008 Outlook:** If, weather predictions of a dry winter materialize, Virginia is poised to experience significant drought with the onset of the growing season in the spring of 2008. The long range weather outlook calls for the potential for above normal temperatures and below normal rainfall through January 2008.
- **More from the Governor:** While it is unlikely that serious water shortages will occur prior to the spring of 2008, it is essential to prepare for the potential for serious water supply impacts in the coming months.
- **DO's and DON'Ts of preparing your drought response and contingency plans:**
  - **DO** review your existing ordinances if you have them, looking for context of applicability and enforceability.
  - **DON'T** wait until there is a full-fledged drought to begin development of a drought response and contingency plan.
  - **DO** begin drafting a local ordinance if your locality does not presently have one. We will share model ordinances with you as they become available to us.
  - **DON'T** wait until you are in a drought situation to identify essential and non-essential water users. Define these as soon as possible with input from your community.

- **DO** make it clear to your community who can institute a drought ordinance and how this will be done. You can head off some problems by communicating **EARLY** and **OFTEN** with your citizens, letting them know what to expect.
- **DON'T** wait until you are in a drought situation to look for emergency supplies or sources of water. Putting time and effort into this up front will pay off in the long run.
- **DO** review existing water agreements to determine what restrictions or options may be available during a drought event.
- **DON'T** assume the plan you have adopted meets the minimum regulatory requirements. All plans must and should be reviewed periodically for regulation compliance and for effectiveness in your locality.
- **DO** consider establishing a Drought Task Force or Committee to regularly discuss drought issues in your region.
- **DO** utilize your water supply planner. We are here to help you develop your Drought Response and Contingency Plan and your Water Supply Plan.

8. **Summary Water Demand Management Discussions (Section 110) and Drought Response and Contingency Plan Discussions (Section 120):** Comments/Concerns/Questions included:

- Regarding Backwash procedures for filters. **Are VDH inspectors in line with a reduced schedule for backwashing?** Normal practice is every 48 hours. The suggestion is that you look at this as another option for water management. Don't make the assumption that it is not worth looking at. Need to look at current technologies when identifying water management options.
- Need to clearly identify issues of water management. The intent is for the locality to look at existing conditions and identify what you are doing in the areas of water conservation and water efficiency.
- Regional plans need to look at ALL localities in the region.
- The regulation says that you HAVE to consider conservation.
- **Is the local and regional planning effort now tied to permitting?** The recent adoption of the amendments to the Virginia Water Protection Permitting Program provides a link between the planning program and the permitting program that was not originally anticipated during the development of the planning regulation. The water supply planning regulation was in effect 2 to 2 ½ years before the permitting program link was developed. The planning efforts will inform the permitting process and will ultimately lessen the time required for the permitting process.
- **Any resources for policy success and % reduction from policies?**
- **How do you measure this?**
    - Nottoway – Put down what they did and will monitor the policies to determine success.

- Need to check on the success of reduction strategies.

- Laundry list ranges from nothing to many and various.
- **Are measures okay?** Yes- It is what you have.
- **How should the plan be formatted to accommodate a lot of information? (Tables versus Narrative)**
- **How do you get large Self Supplied Users on board with the Drought Response and Contingency Plans?**
- **What about golf courses and other self supplied users of water but small (<300k gpm)?**
- **Section 120.A.3 – Do they have to adopt ordinances or just have to implement and enforce practices?**
- **Is there any legal guidance available from the state regarding the enforcement and authority of local governments over private systems?**
- **How do you address housing guidelines or mortgage requirements that define and restrict the level of water rates? There are VRA Financing guidelines that restrict the level of water rates for their properties.**
- **Essential versus Nonessential – How do you determine who is more essential? Has anyone defined these in an ordinance?**
- **Do ordinances have to be approved on a set basis beyond the initial approval or is it set?**
- **Drought Warning/Watch: When do you alert people who use wells?** Base it on base flow levels.
- Drought Contingency plans = education, conservation methods.
- De-centralized alternatives.
- Surface versus ground water.
- More geological studies needed.
- Private Water Systems.
- Manassas – Stage II. Drought Plan in place. Utility enforces with the Planning Department. Use of Hang Door Tags.
- **How are private providers responding to drought?**
- **What about agricultural water use? Where can information be obtained?** Extension Service – Agricultural Survey. **What information is available from this database and how can it best be used to meet the requirements of the regulation?**
- Winchester – In Voluntary Conservation currently. Have only 2 stages (No Watch Stage). Use a stream flow based approach.
- Spotsylvania – Treatment plant expansion to serve summer water landscaping demands. Pro-rated schedule during the summer does not seem to impact residential use. 3 stage Drought Plan with no triggers. Somewhat consensus based.
- Chesterfield – Green Plus.
- Staunton – Preliminary Drought Response Plan. Public notification of voluntary measures based on reservoir level. Have not experienced critical reductions in spring fed water source in recent drought.

- Demand Management – Paper plates in cafeteria. Restaurant water by request only. Drought indicators are centered on the withdrawal point.
- High end residential development is causing increased per capita use.
- Idea for citizen group to decide when Police will go out to actively enforce drought restrictions.
- Community leaders (i.e., prominent figures) can be better than government officials at communicating with the public.

9. **Meeting Wrap-up:** Scott Kudlas thanked all those you attended and participated in the meeting and asked if folks where interested in continuing the cycle of workshops (twice a year, every 6 months). There was a consensus that the 6 months schedule should be continued. He asked for comments from the group.

   - A concern was raised over the fact that the meeting attendees where are drastically different levels and stages in their plan development. With some being well into a Phase II and some just beginning the process.
   - It was suggested that a refresher on all of the elements of the regulation would be good.
   - It was suggested that it might be helpful if staff could provide good and bad examples of processes used to obtain data for different sections of the regulation and good and bad examples of submitted plans.
   - Help is needed to help localities address ground water issues and agricultural uses.

10. Meeting Adjournment

Scott Kudlas again thanked the meeting participants for their time and input. The meeting was adjourned at 4:00 P.M.